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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,723	12/16/2003	Yoshifumi Abe	P24716	3677
7055 7590 04/02/2008 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191				
EXAMINER BERTHEAUD, PETER JOHN				
ART UNIT		PAPER NUMBER		
3746				
NOTIFICATION DATE		DELIVERY MODE		
04/02/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/735,723

Applicant(s)

ABE ET AL.

Examiner

PETER J. BERTHEAUD

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-856)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is in response to amendments filed 1/28/2007. It is noted that claims 1-16 are cancelled and claim 35 has been amended. Due to new grounds of rejection this action has been made Non-Final.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 17-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gennami 6,672,101 in view of in view of Jang 6,237,362, and in further view of Saito 6,599,104.

Gennami discloses an electrically driven compressor, comprising a compression mechanism for sucking, compressing and discharging refrigerant (see col. 3, lines 61-67); a reservoir (85) configured to store liquid which lubricates the compression mechanism and a housing for containing the compression mechanism and the reservoir (1, 5). Gennami discloses that the compressor comprises an electric motor for driving the compression mechanism, the electric motor (49) being housed in the housing (6). However, Gennami does not teach the following claimed limitations taught by Jang and Saito.

Jang teaches an internal oil separator for compressors including a rear end of a compressor housing (1), a suction (11) and discharge port (12), and an oil-separating chamber (21). Jang also discloses a refrigerant go-around passage (indicated by arrows in Fig. 1), provided in the housing, which introduces the refrigerant discharged from the compression mechanism into the housing via a refrigerant introducing port (13), provided in an upper portion of the housing, making the refrigerant go around an axial line of the compressor and returning the refrigerant to a discharge-port side of the housing via a refrigerant returning port (14) provided in the upper portion of the housing, while separating the liquid from the refrigerant by centrifugation or by centrifugation and collision (see col.13, lines 5-9), wherein a liquid returning port (17) is provided to return the separated liquid into the housing in a wall of a mid part of the refrigerant go-around passage in such a manner that the liquid returning port has an orientation that has a component in a direction of gravity and that is deviated from a traveling direction of the refrigerant (see orientation of 17 in Fig. 1). Jang discloses that the refrigerant go-around passage is arranged on the same plane, is provided at a discharge-port side end of the housing (see col. 9, lines 2-12), and comprises a concave streak formed on a substrate (3) attached to an end wall (see tear drop shaped protrusion on the end of housing 1) of the housing or to the housing and a lid (2) which covers the concave streak (see curved portion of 3), wherein the substrate (3) is attached to the housing together with the lid (see connection of lid 2 with housing in Fig. 6). Jang discloses that each of the refrigerant introducing port, the refrigerant returning port, and the liquid returning port is provided at least one position in the traveling direction of the refrigerant (see flow

arrows in Fig. 1), and that the refrigerant introducing port is provided with a guide (18) which directs the collected refrigerant into the refrigerant introducing port (13) (see col. 11, lines 39-42). Jang also discloses that a cross-sectional area of the refrigerant go-around passage is substantially uniform (see cross-section of 21 shown in Fig. 3 which is representative of the cross-sectional line made in Fig. 2, it shows how the cross-section of the go-around passage 21 is uniform in depth). Jang further discloses that the go-around passage would be advantageous because the primarily recovered oil is free from being trailed by the dynamic force of the oil-laden gas refrigerant flowing along the U-shaped passage (indicated by arrows in Fig. 1) within the chamber or from being remixed with the refrigerant.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the compressor assembly of Gennami by specifically modifying the oil separation device, as taught by Jang, in order to remarkably improve the oil separating efficiency of the oil separator (see col. 13, lines 12-19).

Saito teaches a compressor assembly comprising a spiraling refrigerant go-around passage 108 (see Fig. 2b) being spaced from and surrounding a structure 102 which surrounds an axial line of the compressor. Saito further teaches that a cross-sectional area of the refrigerant go-around passage is substantially uniform (see 108, in Fig. 2b).

Therefore, it would have been obvious to one skilled in the art at the time of invention to have modified the compressor assembly of Gennami and Jang by specifically modifying the oil separation device to have the refrigerant go-around

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passage spiral around an axial line of the compressor because it is well known that this structure can be used to separate oil from refrigerant (see col. 5, line 19-28).

Response to Arguments

4. Applicant's arguments filed 1/28/2008 have been fully considered but they are not persuasive.
5. Applicant's arguments with respect to claims 17-35 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER J. BERTHEAUD whose telephone number is (571)272-3476. The examiner can normally be reached on M-F 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art
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PJB
/Peter J Bertheaud/
Examiner, Art Unit 3746